DOCUMENT RESUME

ED 206 391 PS 012 359

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TITLE Early Identification System: Predictive Validity. Research Report 80-14.
INSTITUTION London Board of Education (Ontario). Educational Research Services.
PUB DATE [79]
NOTE 10p.: For related document, see PS 012 360.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Foreign Countries: Grade 1: *Identification: Kindergarten: *Predictive Validity: Primary Education: *Screening Tests
IDENTIFIERS Canada: Ontario (London)

ABSTRACT

During the academic year 1978-79 school teams implemented a newly developed early identification system in all kindergarten and grade one classes in London, Ontario schools. After analysis and revision of the system, the short-term predictive validity of the process was investigated by comparing school team identification ratings made in January 1979 with the September 1979 placement of students. During the academic year 1979-80 the revised early identification system was applied in all kindergarten, grade one and grade two classes. Results of this application were used to assess the predictive validity of the system over a one year period. School team ratings for the years 1978-79 and 1979-80 for those students who were in kindergarten or grade one during 1978-79 were compared. On the basis of the degree of agreement between school team ratings of students made in two successive school years it is concluded that the early identification system has a satisfactory degree of predictive validity. (Agreement between school team ratings is represented in percentages and no correlations are given.) (Author/RH)

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EARLY IDENTIFICATION SYSTEM: PREDICTIVE VALIDITY

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Research Report 80-14

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EARLY IDENTIFICATION SYSTEM: PREDICTIVE VALIDITY

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Board of Education, London, Ontario

During the academic year 1978-79 a newly developed early identification system was applied in all kindergarten and grade 1 classes in the London school system (Stennett & Isaacs, 1978). The results of this first trial of the early identification process were analyzed (Stennett & Isaacs, 1979) and the process revised. The short-term predictive validity of the process was investigated by comparing school team identification ratings, made in January, 1979 with the September, 1979 placement of students (Stennett & Isaacs, 1979).

During the academic year 1979-80 the revised early identification system was applied in all kindergarten, grade 1 and grade 2 classes. Using the results of this application of the identification process it is possible to assess the predictive validity of the process over a one year period by comparing school team ratings[1] for two successive years for those students who were in kindergarten or grade 1 during 1978-79. That assessment is the subject of this report.

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[1]The meaning of the school team ratings are as follows:

0 - insufficient contact with student to make a judgment;

1 - student will be ready, by the end of the school year, for the work of the next school year;

2 - student *may not be ready*, by the end of the school year, for the work of the next school year;

3 - it is *quite certain* that the student *will not* be ready, by the end of the school year, for the work of the next school year.

For purposes of these judgments, 'being ready' means....adequately mastering the minimum core objectives of this year's language, reading and mathematics curricula.'

RESULTS

The most appropriate check on the predictive validity of 1978-79 school team ratings would involve correlating them with an independent measure of students' mastery of the core curriculum taken at the end of each school year. Since such data were not available, it was necessary to use instead the school team ratings made in January of the subsequent school year (1979-80) for grade 1 and 2 students and in May for the kindergarten students. These 'validating' measures have a number of limitations: (a) they are not, in the case of grade 1 and 2, taken at the appropriate time, (b) they may be influenced by raters' knowledge of the 1978-79 ratings, and (c) they constitute a relatively coarse measurement scale.

The reader should also bear in mind that all of the actions taken by the Board's special services personnel, initiated as a result of the classroom teacher and school team's identification work, are geared toward 'invalidating' the school team ratings or predictions. Thus, for example, it is impossible to determine whether a change in a student's team rating from '3' in kindergarten to '1' in grade 1 should be interpreted as a lack of predictive validity or as the success of the interventions undertaken at the request of the school team. Similarly, a change in rating from '1' to '3' may represent either lack of predictive validity or a real change in the level of a student's academic achievement.

Table 1 gives the number and percent of students receiving each possible combination of 1978-79 and 1979-80 school team ratings, by grade and whether or not the student was promoted at the end of the 1978-79 school year. Data for team ratings of 2 and 3 have been grouped together

for ease of presentation.[1] It is apparent from these data that: (a) for students who were promoted, the overall percent of agreement between ratings in the two successive years is quite high at both kindergarten (80.5%) and grade 1 (81.8%), (b) for students who were repeating, the overall degree of agreement is somewhat lower in both kindergarten (69.7%) and grade 1 (51.3%), (c) for promoted students the major source of disagreement in ratings is for those who were rated '1' in 1978-79 but '2' or '3' in 1979-80, the extent of this disagreement being fairly similar in both kindergarten (14.9%) and grade 1 (11.5%), (d) for repeating students, the major source of disagreement in ratings is for those who were rated '2' or '3' in 1978-79 but '1' in 1979-80, the extent of this disagreement being fairly substantial in both kindergarten (27.3%) and grade 1 (47.0%).

Given available data it is difficult to determine the factors responsible for the change in ratings for those promoted students whose ratings went from '1' in 1978-79 to '2' or '3' in 1979-80. It is probably due to some combination of lack of validity of the ratings and real changes in students' academic progress. For students who were repeating a grade in 1979-80 and whose ratings changed from '2' or '3' to '1', the most likely interpretation is that the change in rating represents a real improvement in the students' level of academic achievement due to the facts that they are repeating and have received a variety of special services.

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[1]For all 1978-79 kindergarten and grade 1 students (N=4570), the 1978-79 team ratings correlate .462 with the 1979-80 language/reading ratings and .408 with the 1979-80 mathematics ratings.

Table 2 gives a percentage distribution of students in terms of their 1979-80 school team ratings by their team ratings in 1978-79, separately by grade and whether or not promoted. These data indicate that, for promoted students in both grades, there is a substantially greater likelihood of a student's rating changing from '2' or '3' to '1' (30.5% in kindergarten, 39.6% in grade 1) than from '1' to '2' or '3' (17.5% in kindergarten, 13.8% in grade 1). On the positive side, this suggests that the interventions introduced by school teams have a significant impact. On the negative side, it suggests that there are a number of students not identified in the original screening who subsequently get into academic difficulty.

With respect to students who are repeating their grade the most significant observation is that over half of them are still not perceived by their teachers as likely to master the core curriculum in language or mathematics by the end of the school year.

Tables 3 and 4 provide a statistical description of 1978-79 kindergarten and grade 1 students respectively, grouped by their 1978-79 school team ratings and whether or not they were promoted. All possible subgroups of students are not represented in these data, which are presented primarily to illustrate some of the student characteristics associated with various team ratings. By and large it is apparent that students receiving the least favorable team ratings are more likely to be boys, born in the last trimester (i.e., younger than their classmates), on the speech and language (S/L) teacher's caseload and to have been seen by a Learning Resource Teacher (LRT). They are less likely to receive an unconditional, straightforward promotion to the next grade. If 'treated' by a LRT,

students rated '2' or '3' are less likely to be given a favorable improvement rating.

DISCUSSION

Based on the degree of agreement between school team ratings of students made in two successive school years, it appears that the early identification system probably has an acceptable degree of predictive validity. The fact that the two sets of team ratings agree fairly well does not, however, suggest that the ratings need not be done every year, since some children who may need special assistance are missed and a number of new children enter the system each year at various grade levels. For example, the 1979-80 grade 1 classes contained 415 students who were not in kindergarten or grade 1 in a London elementary school in 1978-79. Similarly, there were 372 students enroled in grade 2 in 1979-80 who were not in grade 1 in the London system in 1978-79.[2]

Finally, although the results presented in this report are encouraging, a more accurate and complete assessment of the predictive validity of the early identification process will require system-wide, objective end-of-year testing of students' mastery of the core curriculum in language and mathematics. Evaluation of the effectiveness of the interventions introduced as a result of the identification process will require, in addition, long-term follow-up of successive cohorts of entering students.

SUMMARY

The degree of agreement between school team ratings of students

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[2]Some of these students may, however, have been repeating grade 2.

made in two successive school years suggests that the early identification system has a satisfactory degree of predictive validity.

REFERENCES

Stennett, R. G. & Isaacs, L. M. *Early Identification System: Complete Set of Forms and Instructions.* Board of Education for the City of London, Ontario. November 1978 (mimeo).

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TABLE 1 Number (N) and Percent of Students Receiving Each Possible Combination of 1978-79 on 1979-80 School Team Ratings, by Grade and Whether or Not Promoted.

Team Rating 1978-1979	Kindergarten							
	Team Rating: Language/Reading 1979-80							
	Promoted				Repeaters			
	1		2,3		1		2,3	
	N	%	N	%	N	%	N	%
1	1501	70.0	319	14.9	1	3.0	1	3.0
2,3	99	4.6	255	10.5	9	27.3	22	66.7
	Grade 1							
1	1587	71.6	255	11.5	7	4.3	3	1.8
2,3	149	6.7	227	10.2	77	47.0	77	47.0

TABLE 2 Percentage Distribution of Students On 1979-80 School Team Ratings by Team Ratings in 1978-79, Separately by Grade and Whether or Not Promoted.

Team Rating 1978-1979	Kindergarten			
	Team Rating: Language/Reading 1979-80			
	Promoted		Repeaters	
	1	2,3	1	2,3
1	82.5	17.5	50.0	50.0
2,3	30.5	69.5	29.0	71.0
	Grade 1			
1	86.2	13.8	70.0	30.0
2,3	39.6	60.4	50.0	50.0

TABLE 3 Descriptive Data for 1978-79 Kindergarten Students Grouped by Their 1978-79 Team Rating and Whether or Not Promoted.

Variable	Group			
	Rating=1 Promoted	Rating=2 Promoted	Rating=3 Promoted	Rating=3 Retained
Number of Cases	1821	259	65	21
% Male	48.1	59.5	63.1	85.7
% Born in Last Trimester	30.2	48.7	53.8	76.2
% on S/L Caseload	8.9	46.8	79.4	94.7
% Seen by LRT	5.0	48.6	53.8	47.6
N Treated by LRT	14	51	17	5
% Receiving Favorable LRT Rating	71.4	51.0	17.7	0.0
% Receiving Unconditional Pass	91.7	42.4	23.8	0.0

TABLE 4 Descriptive Data for 1978-79 Grade 1 Students Grouped by Their 1978-79 Team Ratings and Whether or Not Promoted.

Variable	Group			
	Rating=1 Promoted	Rating=2 Promoted	Rating=3 Promoted	Rating=3 Retained
Number of Cases	1842	274	82	105
% Male	49.3	62.0	62.2	61.9
% Born in Last Trimester	31.9	46.6	40.2	57.1
% on S/L Caseload	7.2	34.1	36.8	58.2
% Seen by LRT	14.3	71.2	81.7	78.1
N Treated by LRT	214	146	44	66
% Receiving Favorable LRT Rating	83.7	79.5	70.5	28.8
% Receiving Unconditional Pass	99.4	87.5	68.3	0.0